



What is claimed is:

2. A modular gauge assembly for holding a plurality of modular block assemblies with gauge elements being selectively mountable in a plurality of spaced recesses of a tufting machine gauge bar, the modular block assembly comprising:

(a) a modular block having a front surface, a pair of side surfaces opposed to each other, a rear surface opposite to the front surface, a top surface and a bottom surface;

(b) a detent extending from a surface of the modular block interfitting with a recess in the gauge bar;

(c) a plurality of vertical parallel slots horizontally spaced between the opposing side surfaces of the modular block for receiving gauge elements;

a1 (d) at least one opening extending horizontally between the opposing side surfaces of the modular block;

(e) a securing pin for slidably engaging said at least one opening; and

(f) a plurality of gauge elements having a distal end and a proximal end with an opening therein, the proximal ends of said gauge elements being received in the vertical parallel slots of the modular block and the securing pin passing through the openings in the proximal ends of the plurality of gauge elements.

3. The modular gauge assembly of claim 2 wherein the detent comprises a vertically disposed elongated tab separated by a channel into an upper portion and a lower portion.

3x a2 A modular gauge assembly for holding a plurality of modular block assemblies with gauge elements being selectively mountable in a plurality of spaced recesses of a tufting machine gauge bar, the modular block assembly comprising:

(a) a modular block having a front surface, a pair of side surfaces opposed to each other, a rear surface opposite to the front surface, a top surface and a bottom surface;

(b) a detent extending approximately from the center of the bottom surface of the modular block and interfitting with a recess in the gauge bar;

a2 (c) a plurality of vertical parallel slots horizontally spaced between the opposing side surfaces of the modular block for receiving gauge elements;

(d) at least one opening extending horizontally between the opposing side surfaces of the modular block; and

(e) a securing pin for slidably engaging said at least one opening.

6. The modular gauge assembly of claim 5 wherein the modular block has a first forward plurality of spaced vertical slots separated by vertical walls with openings therein and a second rearward plurality of spaced vertical slots separated by vertical walls with openings therein.

7. The modular gauge assembly of claim 6 wherein the modular block has a first opening extending between the opposing side surfaces of the modular block and passing through the openings in the vertical walls separating the forward plurality of spaced vertical slots and a second opening extending between the opposing side surfaces of the modular block and passing through the openings in the vertical walls separating the rearward plurality of spaced vertical slots.

a3 6. 8. A modular gauge assembly for holding a plurality of modular block assemblies with gauge elements being selectively mountable in a plurality of spaced recesses of a tufting machine gauge bar, the modular block assembly comprising:

(a) a modular block having a front surface, a pair of side surfaces opposed to each other, a rear surface opposite to the front surface, a top surface and a bottom surface;

(b) a detent extending from a surface of the modular block interfitting with a recess in the gauge bar, wherein a fastener is used to pass through the detent and secure the modular block assembly to the gauge bar;

03 (c) a plurality of vertical parallel slots horizontally spaced between the opposing side surfaces of the modular block for receiving gauge elements;

(d) at least one opening extending horizontally between the opposing side surfaces of the modular block; and

(e) a securing pin for slidably engaging said at least one opening.

10. The modular gauge assembly of claim 7 further comprising a plurality of gauge elements having a distal end and a proximal end with an opening therein, the proximal ends of said gauge elements being received in the vertical parallel slots of the modular block and the securing pin passing through the openings in the proximal ends of the plurality of gauge elements.

12. In a tufting machine a modular gauge assembly comprising:
extending along at least a portion of the length of the gauge bar, the straight side portion of the gauge bar:

(a) an elongated gauge bar with a straight side having a plurality of spaced recesses defined therein;

(b) a plurality of modular blocks for engaging the straight side of the guide bar, each modular block having a detent which aligns with a recess in the gauge bar and having:

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- (i) a rear surface;
- (ii) spaced parallel tufting machine gauge elements protruding from the modular block, each gauge element having a proximal end and a spaced distal end, the proximal ends of the gauge elements having an opening for fixing a plurality of the gauge elements to the block with a single securing pin;
- (iii) a hole in the detent; and
- (iv) a fastener utilizing the hole in the detent for removably securing each of the modular blocks to the gauge bar.

13. The modular gauge assembly of claim 12 wherein the detent of each mounting block comprises a raised member defined on the rear surface of the modular block, said raised member being interfitting with the spaced recesses in the gauge bar.

14. The modular gauge assembly of claim 13 wherein the raised member is split to accommodate restraining surfaces.

15. A process of producing a tufting machine, the tufting machine having a tufting zone therein, said process comprising the steps of:

- (a) forming a plurality of spaced, parallel, straight recesses across one side portion of an elongated gauge bar of the tufting machine;
- (b) installing the gauge bar transversely of the tufting machine in the tufting zone;
- (c) producing a plurality of modular blocks where each block has opposed parallel side surfaces a bottom surface, a rear surface, and a detent;